

AAC Resources

Evaluation to Implementation

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Adapted from Ann McCormick,
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Today's Goals

- ❖ Legal Considerations
- ❖ AAC Evaluations
- ❖ AAC Devices and Features
- ❖ AAC Implementation Strategies
- ❖ Online Resources

Assistive Technology Device

Section 300.5 Assistive technology device.

- Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability. The term does not include a medical device that is surgically implanted, or the replacement of such device. (Authority 20 U.S.C. 1401(1))

Assistive Technology Service

Section 300.6 Assistive technology service
Is any service that directly assists a child with a disability with the selection, acquisition, or use of an assistive technology device. The term includes-

- (a) *The evaluation of the needs of a child* with a disability, including a functional evaluation of the child in the child's customary environment;

Assistive Technology Service

Section 300.8 Continued

- (b) Purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities;
- (c) Selecting designing, fitting, customizing, adapting, applying, retaining, repairing, or replacing assistive technology devices;

Assistive Technology Service

Section 300.8 Continued

- (d) Coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;
- (e) Training or technical assistance for a child with a disability or, if appropriate, that child's family; and

Assistive Technology Service

Section 300.8 Continued

- (f) Training or technical assistance for professionals (including individuals or rehabilitation services), employers, or other individuals who provide services to employ, or are otherwise substantially involved in the major life functions of children with disabilities.

IDEA Sec. 300.105 Assistive Technology

- (a) Each public agency must ensure that assistive technology devices or assistive technology services, or both, as those terms are defined in §§300.5 and 300.6, respectively, are made available to a child with a disability if required as a part of the child's—
- (1) Special education under §300.39;
 - (2) Related services under §300.34; or
 - (3) Supplementary aids and services under §§300.42 and 300.114(a)(2)(ii).

IDEA 2004 Sc. 300.38 and 300.114 (a) (2) (ii).

(b) On a **case-by-case basis, the use of school-purchased assistive technology devices in a child's home or in other settings** is required if the child's IEP Team determines that the child needs access to those devices in order to receive **FAPE**.

(Approved by the Office of Management and Budget under control number 1820-0030)

(Authority: 20 U.S.C. 1412(a)(1), 1412(a)(12)(B)(i))

[71 FR 46753, Aug. 14, 2006, as amended at 82 FR 29759, June 30, 2017]

American Speech Language and Hearing Association (ASHA):

"AAC means all of the ways that someone communicates besides talking. People of all ages can use AAC if they have trouble with speech or language skills. **Augmentative** means to add to someone's speech. **Alternative** means to be used instead of speech. Some people use AAC throughout their life. Others may use AAC only for a short time, like when they have surgery and can't talk."

AAC Definition

- AAC refers to all communication that supplements or augments speech.
- AAC covers a broad range of techniques, strategies and devices.
- Devices range from simple picture boards to sophisticated, computer-based devices with synthetic voice.
- Other AAC may include facial expressions, gestures, body postures, sign language, drawing, and writing.

AAC Evaluation

AAC evaluation is primarily about

COMMUNICATION
Expressive and Receptive
Language

NOT

technology

MODELS OF AAC EVALUATION

- Candidacy Model -(1970s - 1980s)
 - An eligibility model
 - “too something” to qualify for AAC services.
 - “too many” of some skills.
 - “not ready for” criteria (prerequisite skills).
 - Insufficient discrepancy between cognitive and language/communication
- functioning on formal tests.
- **NONE OF THESE ELIGIBILITY CRITERIA IS SUPPORTED BY RESEARCH, AND NONE IS APPROPRIATE TO APPLY FOR ACCESS TO AAC SERVICES.**

MODELS OF AAC EVALUATION

- Communication Needs Model (1980s - 1990s)
- Candidacy for AAC interventions based on an individual's unmet communication needs.
 - Process:
 - Document the communication needs.
 - Determine how many of these needs are met through current system.
 - Design AAC intervention to meet needs that are not being met.
- Does not consider strengths or abilities

MODELS OF AAC EVALUATION

- Participation Model - (2000s)
- Process for conducting AAC assessment and designing intervention *based on the functional participation requirements of peers without disabilities* of the same age as the person who uses AAC.

MODELS OF AAC EVALUATIONS

- Dynamic Assessment
- ASHA defines dynamic assessment as *a method of conducting a language assessment which seeks to identify the skills that an individual child possesses as well as their learning potential*. A dynamic assessment should include active client and clinician/assessor participation, modification of assessments as needed, and should be fluid and responsive. It is a highly interactive process that should adapt to the preferences and communicative needs of the client.
- ASHA Multicultural Dynamic Assessment
- ASHA Incorporating Dynamic Assessment

PHASES OF EVALUATION

Phase I: Initial Assessment for Today -

- Supports immediate communication interaction so that communication can begin.
- Assess current communication needs.
- Assess physical, cognitive, language, and sensory capabilities.
- Match today's needs and capabilities.

PHASES OF EVALUATION

Phase II: Detailed Assessment for Tomorrow -

- Develop a communication system that will support the individual in a variety of environments beyond the familiar ones.
- Requires careful assessment of the individual's expected participation patterns.
- Match the participation requirements of each setting.

PHASES OF EVALUATION

Phase III: Follow-up Assessment -

- Maintaining AAC system that meets the changing capabilities and lifestyles
- Periodically examine communication equipment
- Assess needs and abilities of communication partners
- Reassess the capabilities of the AAC user
- Vital and frequent phase for degenerative illness

AAC EVALUATION

- Primary purpose is to gather enough information to determine certain capabilities and functions for an AAC system or device.
- Extensive information is not necessary in gathering preliminary information about cognitive and language skills.
- Zero Rejection Policy!

AAC EVALUATION BASICS

- Focus is not on diagnosing a disorder. It is usually very clear that the student has some type of disorder.
- Focus is on considering how the student might use AAC to enhance his/her daily life communication.
- When conducting an AAC assessment, we systematically search for the student's strengths, with a very practical focus on how those strengths can be used to help the person communicate.

GUIDELINES

AAC evaluation must:

- Be transdisciplinary: evaluate and observe with other team members so testing is not duplicated.
- Focus on what the client can do, not what s/he/they can't do.
- Attempt to determine stimulability or potential for learning or using various AAC systems.
- Use pre-evaluation questionnaires & results from previous test to gain information.

THREE TYPES OF REQUIRED INFORMATION

Evidenced Based Practice

- Knowledge about best practices (i.e., ASHA)

Knowledge about the student - Identification of the individual's abilities, needs and expectations.

- Assessment process

Knowledge about devices, technology and systems

- Gathering information about technology and remaining current (i.e., SIG 12, Closing the Gap)

Begin with what you know:

- Communication Environments - “A student’s environment is the single most important factor in developing communication skills”;
 - In which places does the student have to communicate?
 - When does the student have to communicate?
 - What might the student say in each setting?
 - What type of AAC system would work best?
- Communication Partners
- Communication Skills
- Communication Needs
- Physical Skills
- Sensory Limitations

FEATURE MATCH

Then,

Match the individual's abilities, needs and expectations to AAC device features and strategies. Assess AAC Features and Strategies Through Trial Periods and Mock-ups

- Revise and refine feature match decisions
- Address environmental issues
- Reach team consensus

Develop on-going implementation plan reflecting the individual's abilities, needs and expectations.

SPECIFIC ASSESSMENT

- Overall - evaluate:
 - The individual's ability to use existing expressive communication modes.
 - The individual's current communication needs.
 - The individual's communication environments and routines within those environments.
 - Communication partner characteristics.

SPECIFIC ASSESSMENT

- Physical Level
 - Medical
 - Fatigue
 - Natural Speech
 - Motor Capabilities - goal is to identify optimal seating and positioning and motor techniques for access.
 - Determine a motor response for accessing an AAC system

SPECIFIC ASSESSMENT

- Sensory/Perceptual - goal is to determine vision and hearing, as well as size, type, placement of symbols and language input and output options.
 - Visual
 - Auditory
 - Symbols

SPECIFIC ASSESSMENT

- Educational Perspective:
 - Cognitive
 - Language - Comprehension and Expression (semantics, syntax, morphology, pragmatics)
 - Symbolic Comprehension and Expression
 - Literacy Levels

SPECIFIC ASSESSMENT

- Personal Qualities:
- Social ability
 - Behavior
 - Motivation
- Technology
 - Team Supports
 - Non-technical back-up system
- Use assessment information to develop a list of AAC devices to consider for further evaluation.

SPECIFIC ASSESSMENT

- Evaluation is more than a battery of tests and written reports.
- Assessment is not a one-shot deal; it is an ongoing process.
- AAC evaluation involves more than assessing the individual. It looks at the potential AAC user, the environment and the communication partner.
- May be formal or informal.
- Don't test what is not needed
- Make a video to share with team members

INFORMAL AAC FRAMEWORKS

- Assessing Student's Needs for Assistive Technology.
- Designed to analyze fine motor skills related to computer or device use, communication, seating and positioning, mobility, vision and hearing.
- Assessment of Learning Process for AAC

FEATURE MATCH

- One of the most popular methods used to determine the best AAC system.
- You must match the needs of the individual to the features that are possible in a variety of devices.
- Why learn about features?
 - Literally hundreds of AAC devices on the market - it is impossible to have experience with each one.
 - New devices become available every year.
 - Families may hear about a device before you do.

FEATURE MATCH

Therefore,

- You should not aspire to learn about all the individual devices on the market - you would never succeed!
- It is better if you learn about the features of AAC systems, so that you can evaluate new devices as they emerge.
- Most devices share features with existing systems.
- Learn about new devices by comparing their features to those of the existing system.

LITE TECH VS. HIGH TECH

- AAC is most effective when thought of as a “system” rather than a specific device or piece of equipment.
- The greater the variety of communication options that a student has available to choose from, the better opportunity s/he/they will have to communicate in every situation.
 - i.e., bathroom or swimming may not lend itself to the use of a high tech system, but a laminated basic needs board does.
- Using this “system” approach avoids the pitfalls of relying on only one device or technique.
- High tech devices may break down and need repairs, with lite tech devices serving in the interim.

Trial Period

Final purchase should be made only after:

- The communication partners have made an honest effort to use the AAC system with the student;
- The student has shown an ability and interest in using it during the trial period.
- Trial devices can come from device manufacturers
- Trial devices can be loaned from lending networks such as:

○ MN Star: Assistive Technology
Lending Organizations

Specific Assessment for All Areas

- Hawaiian Assistive Technology Capabilities Form
 - Reviews all areas to consider, cognitive, sensory, motor, and AAC
 - Looks at current abilities
 - Includes Functions of Communication
 - Includes computer access for other academic activities

AAC Feature Match Protocols

- AAC SETT
 - Minneapolis School AAC SETT PPT
- AAC Genie App
- Test of Aided-Communication
Symbol Performance (TASP)

MSP Schools AAC SETT (Student, Environment, Tasks, Tools)

Population-Any learner who needs AAC, with focus on those who don't have a formal language system

Overview of Assessment:

- Framework includes observation and team judgment
- Student profile based on intentionality
- Tools: Feature Match
 - Symbols/vocab, access, visual display, output, etc.
- Embeds Ecological Inventory piece

AAC Genie App



- Population-
- Overview of Assessment
- Informal diagnostic tool intended to identify skill areas for using AAC device. Cost \$12.99
- 13 Subtests
 - [Apple AAC Genie Website](#)

Test of Aided-Communication Symbol Performance (TASP)

Population-Learners who can attend to a task, recognize line drawings & direct-select from a 4-pic array

Overview of Assessment

- Individually administered
- Systematic/objective
 - field/symbol size
 - grammatical encoding
 - categorization skills
 - syntax
- Use results for goal-setting, displays, selecting devices



Informal AAC Communication Samples

- Bridge School Ecological Inventory
- AAC Tech Connect: Communication Forms and Functions

Ecological Inventory: Vocabulary Selection Worksheet

Student: _____

Informant: _____

Process:

- Observe a peer without disabilities engage in an activity/ event of interest.
- Write a step-by-step list of the language required to communicate during the activity.
- Assess the target student against the language inventory to identify discrepancies
- Select messages for student who uses AAC, create communication setups

Environment Setup Activity Date	Language Used (by peers without disabilities)	To say what? Why?	Possible message for target student? Communication mode (Low tech symbol?) Communication device?

Adapted by Holly Peartree from Reichle, J., York, J., & Sigafos, J. (1991). Implementing augmentative and alternative communication strategies for learners with severe disabilities. Baltimore: Paul H. Brookes Publishing Co.

Name: _____ Date: _____

Observer: _____

Communication Functions

OBSERVATIONS	FUNCTIONS OF COMMUNICATION							MESSAGE FORMULATION				
	None	Single	Signs	Vocal	Other	Pics	Words	Spell	Comm	Single	Phrase	Gram
Attentive/Receptive												
Demonstrate appropriate listening/attending skills												
visual												
auditory												
Seeks to interact with environment												
others												
Use turn-taking activities												
play/structure												
Follow directions												
- 1 part, 2 part, 3 part												
Understand common vocabulary												
objects												
pictures												
Answer simple questions												
yes / no												
who/what/where												
Answer more complex questions												
Expressives												
Make choices when offered												
Continue/terminate activity												
Express needs/wishes												
objects												
actions												
attention												
help												
Express feelings appropriately												
Protest/diagnose appropriately												
Direct actions of others												
Use greetings & other social forms												
greet others												
please, thank you, etc.												
others												
Give personal information												

Environment Key: C=classroom P=playground G=gym T=therapy

Prompting Key: I=Independent PP=physical prompting GP=gesture modeling MH=modeling

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Informal AAC Language Stages

- Populations: all ages with abilities severe, moderate and mild
- Overview: resources that break down current language abilities in stages from basic to independent
 - AAC Language Lab-Language Screener
 - Dynavic Assessment Goals Grid-2

Language Sample

- Conduct a formal language sample through observations, videos and data logging on devices.
- Review the areas of language: semantics, syntax, pragmatics, morphology
- Determine Mean Length of Utterance and Type Token Ratio

Language Sample Forms

- List what was said, how it was said, the communication function intended, and how many times said.

Language Sample

Name:

Date:

Recorder:

Context/ Location	What the Student Wants/Said	Comm. Form (verbal, gesture, eye gaze, device...)	Language Function (noun, verb..., phrase, complete sentence)	Comm. Function (greeting, question, answer, comment...)	How Often

Data Logging on Devices

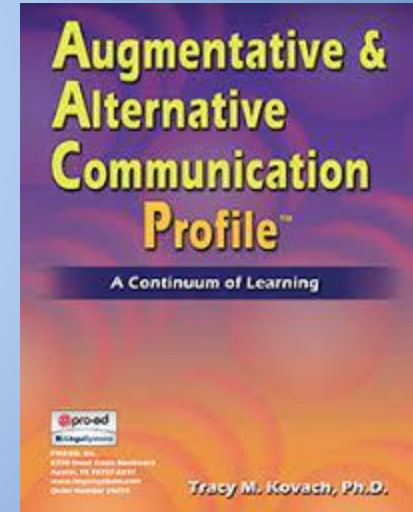
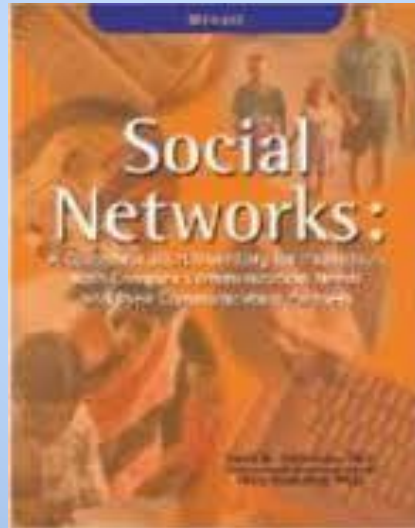
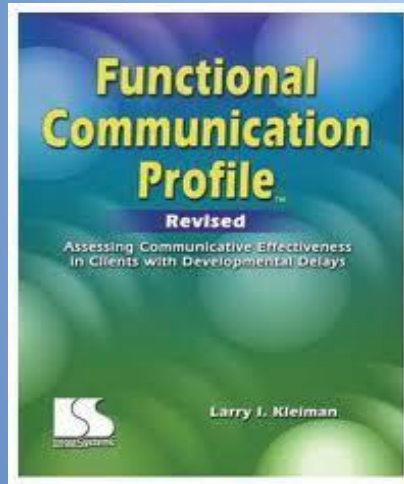
- "It is a feature that is available in some speech generating devices and apps. When active, it is continuously collecting data about how the device or app is being used." (Van Totenhove, 2023)
- Offered in devices and apps manufactured and sold by PRC-Salttillo, Avaz, CoughDrop, and Speak For Yourself AAC
- Want to collect Spontaneous Novel Utterance Generated (SNUG)
- Limitations include no way to tell if someone was modeling, no where, when or who data of conversation
- Need informed consent to collect data this way. See permission form as an example

Online Tools to Analyze Language

- SUGAR- Samples Utterances and Grammar Analysis Revised (Pavelko & Owens, 2017)
- SALT- Systematic Analysis of Language Transcripts (Miller & Iglesias, 2015)
- Realize Language
 - Created by Prentke Romich Company

Specific Assessments

- We have AAC Assessments! (finally)



Functional Communication Profile

by Larry I. Kleiman

- Population-students with autism and pervasive developmental disorders
- Overview of Assessment:
 - Comprehensive assessment including sensory, expressive, receptive, non-verbal, AAC systems, speech, voice, oral and fluency skills
 - Checklist rating form is easy and quick to fill out
 - Uses multiple methods to obtain ratings such as records review, observations and staff/family input

Four Components of Communicative Competence by Janice Light

- **LINGUISTIC COMPETENCE**
Receptive and expressive language skills of one's native language.
- **OPERATIONAL COMPETENCE**
Technical skills needed to operate the AAC system accurately and efficiently.
- **SOCIAL COMPETENCE**
Skills of social interaction such as initiating, maintaining, developing, and terminating communication.
- **STRATEGIC COMPETENCE**
Compensatory strategies that people who rely on AAC use to deal with functional limitations associated with AAC use.
I.e., resolving communication breakdown.
- See Functional Communication Training

Social Networks: A Comm. Inventory

by Sarah W. Blackstone, Ph.D. and Mary Hunt Berg, Ph.D.

Population- individuals with complex communication needs and their partners

Overview of Assessment:

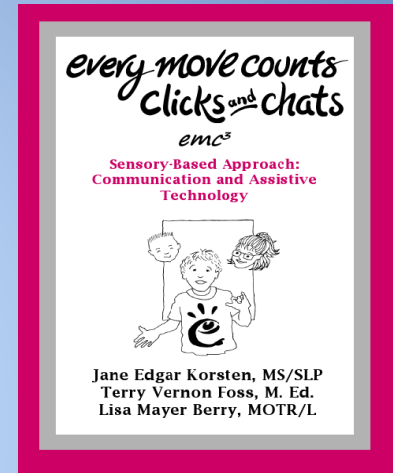
- Takes a "person centered" approach
- Communication methods are id across environments
- Includes reading and writing abilities
- Easy to use checklists and summary sheets

AAC PROFILE

- Population- age 2 to adults who use AAC
- Overview of Assessment:
 - Identifies areas of strength and needs
 - Determines functional and long-range outcomes
 - Identifies ways that AAC support members can define and coordinate their roles for intervention

AAC Evals for Severe or Multiply Impaired

- Every Move Counts
- Communication Matrix
- Minnesota Deaf Blind Project



Message	Category	Behavior	Mastery
A1: Expresses Discomfort	Facial Expressions	grimace	Mastered
	Body Movements	head movements (turn head away)	Mastered
	Body Sounds	cry, grunt, scream	Mastered
	Body Movements	limb movements (kick legs, bat arms)	Mastered
	Body Movements	changes in posture (stiffen body, hunch, turn away)	Mastered
A2: Expresses Comfort	Facial Expressions	smile	Mastered
	Body Sounds	coo, squeal	Mastered
	Body Movements	head movements (bob head)	Mastered
	Body Movements	limb movements (kick legs, bat arms)	Mastered
	Body Movements	changes in posture (stiffen body, relax)	Mastered

Every Move Counts, Clicks & Chats

Jane Edgar Korsten, Terry Vernon Foss & Lisa Meyer Berry

Population- Learners "perceived as having 'severe and profound sensorimotor differences'."

Overview of Assessment:

- First "Counts": build association between symbol & event
- "Counts" includes a Sensory Assessment (with learner), Communication Assessment (observation/interview) and Symbol Assessment
- Then "Clicks" (purposeful switch use) then CHATS (add voice output) assessments
- Detailed flowcharts/text guide intervention implementation

Communication Matrix

Charity Rowland, Ph.D. (www.communicationmatrix.org)

Population-Learners at all ages whose communication skills are at the birth to 24 months range

Overview of Assessment:

- Staff version & parent (online) version
- Respond to questions re: learner's communication skills
- Assesses communicative behaviors, communicative functions and level of communication (7 levels)
- 10 minutes to an hour to complete
- Provides visuals re: how learner is communicating and targets for intervention

Minnesota Deaf Blind Project

- Population: any age who are classified as deaf and blind
- **Overview of Resource:**
 - Consider doing the Intervener Training to learn more about specific assessment and interventions
 - Work collaboratively with your DHH, VI, PHD co-workers.

Light AAC Systems

Simple Voice Output Devices

- Big Mac
- Smooth Talker
- Step by Step
- Talkables



Mid AAC Systems

VOD with Multiple Levels

- Cheap Talk
- Go Talk
- Super Talker
- Quick Talker
- Prox Talker



High Tech Devices Dynamic Display

- TobiiDynavox
- Prentke Romich
- Talk to Me Technologies
- Forbes AAC
- Control Bionics



AAC Manual Systems

-UK ACE Center Resources

-Pragmatic Organization Dynamic Display

by Gayle Porter

-Picture Exchange Communication System

by Pyramid Education (Lori Frost & Andy Bondy, Ph.D.)

Developing & Using a Communication Book

Population: Learners who are producing some communicative behaviors

Simple guide

- Core/fringe vocabulary
- Emphasis on communication partner to use/model the symbols (Aided Lang Stim) in addition to supporting learner
- Five stages

Pragmatic Organized Dynamic Display (PODD)

Population: Beginning to advanced communicators who can point or need Partner Assisted Scanning

Manner of organizing the vocabulary/ symbols in a communication book

- PCS/Boardmaker
- Based on communication function & conversational discourse
- Supports receptive understanding & provides aided lang stim; child output

Picture Exchange Communication System (PECS)

Population: Originally preschoolers with social-communication challenges, now broader use; need fine motor/visual discrim skills

Training Protocol

- Based on ABA principles
- Critical Communication Skills Checklist
- Approach communication partner & exchange pic for desired item

Implementation Strategies for Severe to Profound

- -Two Switches to Success and Can We Chat? by Linda Burkhart
- Can We Chat by Caroline Musselwhite and Linka Burkhart
- Every Move Counts Clicks and Chats

Two Switches to Success

Population: "Access for Children with Severe Physical and/or Multiple Challenges"

Progression of eight steps

- Types of scanning
- From single switch to two-switch step scanning

Can We Chat?

Population: "Students who are not yet highly successful communicators"

"A Make It/Take It Book"

- Parallel Programming (Goosens)
- Sequenced social script development
- "Feel" of successful conversations
- Co-planned; programmed into step-listening device

Communication Partner Techniques

- PrAACtical 10 AAC Intervention Strategies
 - Make language visible
 - Model (Aided language input)
 - Communication temptations
 - Expansions and extensions
 - Repetition
 - Contrastive examples
 - Backward and forward chaining
 - Structure
 - Written choice
 - Recast

AAC WEB RESOURCES for Literacy Activities

- [Tar Heel Reader Books](#)
- [TobiiDynavox Core First Lessons](#)
- [Prentke Romich AAC Language Lab](#)
- [Assistiveware Core Word Classroom](#)

AAC WEB RESOURCES

for Training and AAC Information

[ASHA AAC Assessment Practice Portal](#)

[Minnesota Department of Education AT Resources](#)

[Penn State AAC Learning Center](#)

[Children's Treatment Network](#)

[Jane Farrall](#)

[Project Core](#)

[Linda Burkhart](#)

[PrAACtical AAC](#)

YouTube Channels on AAC

- Assistiveware with Amanda Hartmann
 - Videos on implementation strategies and communication partner techniques
- The Talk Link Trust
 - Videos on Partner Assisted Scanning for severe to profound AAC users, Literacy Strategies, and Implementation Ideas

AAC Resource Website

- Created by Mary Baumann-Spooner
- Material from former trainings including PPT and Handouts
- Not all inclusive but will find today's resources
- [AAC Resources](#)